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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,890	09/22/2006	Tesujiro Kondo	450100-05480	4739

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EXAMINER	
ZAMAN, FAISAL M	

ART UNIT	PAPER NUMBER
2111	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/593,890	KONDO ET AL.	
	Examiner	Art Unit	
	Faisal M. Zaman	2111	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 November 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 September 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10/15/2010*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. **Claims 1-8 and 10-15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Diard (U.S. Patent No. 7,015,915), Kondo et al. ("Kondo") (U.S. Patent Application Publication No. 2004/0019717), and Nakatsugawa (U.S. Patent No. 6,754,719).

Regarding Claim 1, Diard discloses an information-signal-processing apparatus (Diard, Figure 1, item 100) comprising:

plural functional blocks each for processing an information signal (Diard, Figure 1, items 135, 155, and 165); and

a control block for controlling operations of the plural functional blocks (Diard, Figure 1, item 105),

wherein the control block or a predetermined block of the control block and the plural functional blocks issues a common command (Diard, Figure 4, item 425, Column 6, lines 28-30); and

each of the plural functional blocks adaptively operates in accordance with the issued common command (Diard, Column 6, lines 32-35), and

wherein the information-signal-processing apparatus further comprises a chassis that incorporates the plural functional blocks and the control block (Diard, Column 3, lines 4-7; i.e., the chassis of a personal computer),

wherein the common command is a broadcast type command, and each common command is transmitted to each one of the plural functional blocks (Diard, Column 6, lines 30-40; i.e., all GPUs 405-415 receive the commands whether or not they are selected),

wherein the information signal includes image signals, and at least one functional block of the plural functional blocks performs an image quality improvement processing (i.e., image rendering), and the common command includes information related to the image quality improvement processing (Diard, Column 3, lines 36-44).

Diard does not expressly disclose wherein the common command includes information indicating a noise level and a resolution level of an image signal, and

Wherein each common command is converted into a block-specific command based on a conversion table that associates each common command with an initial value, a predetermined number of functional blocks, and the block-specific command corresponding to each of the predetermined number of functional blocks.

In the same field of endeavor (e.g., image transfer between multiple devices), Kondo teaches at least one functional block of plural functional blocks (Kondo, Figure 4, items 64 and 65) performs an image quality improvement processing, and a common command includes information related to the image quality improvement processing

(Kondo, paragraph 0207; i.e., the class code is common to both types of image quality improvement processing features [resolution-creating and noise-eliminating]), and

Wherein the common command includes information indicating a noise level and a resolution level of an image signal (Kondo, Figure 4, items 64 and 65, paragraphs 0207-0210; i.e., the resolution-creating or noise-eliminating coefficients are chosen based on the class code that is supplied to the adaptive processor 62).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Kondo's teachings of image transfer between multiple devices with the teachings of Diard, for the purpose of improving the quality of the image signals.

Also in the same field of endeavor (e.g., common command transferring between a plurality of device), Nakatsugawa teaches wherein each common command is converted into a block-specific command based on a conversion table (Nakatsugawa, Figure 1, item 7) that associates each common command with an initial value (Nakatsugawa, Figure 2, "Play" and "Stop"), a predetermined number of functional blocks (Nakatsugawa, Figure 2, "CD" and "DVD" of various types; i.e., one of functional blocks 5b, 5c, or 5d in Figure 1), and the block-specific command corresponding to each of the predetermined number of functional blocks (Nakatsugawa, Column 5, lines 26-42; i.e., each of the block-specific commands CP1, CS1, DP1, DS1, etc., correspond to one of the functional blocks 5b, 5c, or 5d).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Nakatsugawa's teachings of common

command transferring between a plurality of devices with the teachings of Diard, for the purpose of allowing an intended device to properly execute a received command.

Regarding Claim 2, Diard discloses wherein the functional blocks change a signal path or signal processing in accordance with the common command (Diard, Column 3, lines 36-44).

Regarding Claim 3, Diard discloses wherein the control block includes command acquisition means for acquiring the common command (Diard, Column 3, lines 7-23).

Regarding Claim 4, Diard discloses wherein the command acquisition means acquires the common command from the plural functional blocks (Diard, Column 3, lines 29-44).

Regarding Claim 5, Diard discloses wherein the command acquisition means acquires the common command from outside of the apparatus (Diard, Column 3, lines 7-23).

Regarding Claim 6, Diard discloses wherein the control block has a first common command that corresponds to a user operation; and

wherein if the user operation that corresponds to the first common command is performed, the control block delivers this first common command to the plural functional blocks (Diard, Figure 1, item 120, Column 3, lines 7-23).

Regarding Claim 7, Diard discloses wherein the control block has a second common command that does not correspond to a user operation; and

wherein the control block delivers the second common command to the plural functional blocks without associating this command with the user operation (Diard, Column 3, lines 7-23; i.e., a command located in memory 110).

Regarding Claim 8, Diard discloses wherein the block that issues the common command delivers most recent values of the common commands of all of kinds or some of the kinds to the plural functional blocks for every predetermined lapse of time (Diard, Column 6, lines 12-17).

Regarding Claim 10, Nakatsugawa teaches wherein functional blocks each comprise a control section (Nakatsugawa, Figure 1, item 7 with 3b) and a functional section (Nakatsugawa, Figure 1, item 4b with 5b) which is controlled by this functional section;

wherein the control section includes:

storage means for storing a correlation between the common command related to its own functional block and an intra-functional-block command used to control the control section (Nakatsugawa, Figure 1, item 7);

reception means (Nakatsugawa, Figure 1, item 6) for receiving the common command from a control block (Nakatsugawa, Figure 1, item 4a); and

conversion means for, if the common command received by the reception means is the common command related to its own functional block, converting this common command into the intra-functional-block command based on the correlation stored in said storage means (Nakatsugawa, Figure 1, item 6, Column 4 line 64 - Column 5 line 8).

The motivation that was used in the combination of Claim 1, supra, applies equally as well to Claim 10.

Regarding Claim 11, Diard discloses wherein the predetermined block issues the common command including a result of processing the information signal (Diard, Column 3, lines 7-23).

Regarding Claim 12, Diard discloses wherein the control block and said plural functional blocks are connected to each other via a control bus (Diard, Figure 1, item 160).

Regarding Claim 13, Diard discloses wherein each of the plural functional blocks is constituted of a substrate; and

wherein some or all of the plural functional blocks are respectively inserted into slots formed in a chassis thereof (Diard, Column 3, lines 4-7; i.e., the chassis of a personal computer).

Regarding Claim 14, Diard discloses a functional block control method comprising the steps of:

transmitting a common command (Diard, Figure 4, item 425, Column 6, lines 28-30) to plural functional blocks (Diard, Figure 1, items 135, 155, and 165), respectively, used to process an information signal from a control block (Diard, Figure 1, item 105) or from a predetermined block of the control block and the plural functional blocks; and

adaptively operating the plural functional blocks in accordance with the common command (Diard, Column 6, lines 32-35),

incorporating the plural functional blocks and the control block to a same chassis (Diard, Column 3, lines 4-7; i.e., the chassis of a personal computer),

wherein the common command is a broadcast type command, and each common command is transmitted to each one of the plural functional blocks (Diard, Column 6, lines 30-40; i.e., all GPUs 405-415 receive the commands whether or not they are selected),

wherein the information signal includes image signals, and at least one functional block of the plural functional blocks performs an image quality improvement processing

(i.e., image rendering), and the common command includes information related to the image quality improvement processing (Diard, Column 3, lines 36-44).

Diard does not expressly disclose wherein the common command includes information indicating a noise level and a resolution level of an image signal, and

Wherein each common command is converted into a block-specific command based on a conversion table that associates each common command with an initial value, a predetermined number of functional blocks, and the block-specific command corresponding to each of the predetermined number of functional blocks.

In the same field of endeavor, Kondo teaches at least one functional block of plural functional blocks (Kondo, Figure 4, items 64 and 65) performs an image quality improvement processing, and a common command includes information related to the image quality improvement processing (Kondo, paragraph 0207; i.e., the class code is common to both types of image quality improvement processing features [resolution-creating and noise-eliminating]), and

Wherein the common command includes information indicating a noise level and a resolution level of an image signal (Kondo, Figure 4, items 64 and 65, paragraphs 0207-0210; i.e., the resolution-creating or noise-eliminating coefficients are chosen based on the class code that is supplied to the adaptive processor 62).

Also in the same field of endeavor, Nakatsugawa teaches wherein each common command is converted into a block-specific command based on a conversion table (Nakatsugawa, Figure 1, item 7) that associates each common command with an initial value (Nakatsugawa, Figure 2, “Play” and “Stop”), a predetermined number of functional

blocks (Nakatsugawa, Figure 2, "CD" and "DVD" of various types; i.e., one of functional blocks 5b, 5c, or 5d in Figure 1), and the block-specific command corresponding to each of the predetermined number of functional blocks (Nakatsugawa, Column 5, lines 26-42; i.e., each of the block-specific commands CP1, CS1, DP1, DS1, etc., correspond to one of the functional blocks 5b, 5c, or 5d).

The motivation that was used in the combination of Claim 1, supra, applies equally as well to Claim 14.

Regarding Claim 15, Diard discloses a functional block comprising:

a control section (Diard, Figure 1, item 105); and

a functional section that is controlled by this control section (Diard, Figure 1, items 135, 155, and 165),

wherein the functional block and the control block are incorporated by a same chassis (Diard, Column 3, lines 4-7; i.e., the chassis of a personal computer),

wherein the common command is a broadcast type command, and each common command is transmitted to each one of the plural functional blocks (Diard, Column 6, lines 30-40; i.e., all GPUs 405-415 receive the commands whether or not they are selected),

wherein the functional section includes a function to perform an image quality improvement processing (i.e., image rendering), and the common command includes information related to the image quality improvement processing (Diard, Column 3, lines 36-44).

Diard does not expressly disclose wherein the control section includes:

storage means for storing a correlation between a common command related to its own functional block and an intra-functional-block command used to control the control section;

reception means for receiving the common command from a control block; and

conversion means for, if the common command received by the reception means is the common command related to its own functional block, converting this common command into an intra-functional-block command based on the correlation stored in the storage means,

wherein the common command includes information indicating a noise level and a resolution level of an image signal, and

wherein each common command is converted into a block-specific command based on a conversion table that associates each common command with an initial value, a predetermined number of functional blocks, and the block-specific command corresponding to each of the predetermined number of functional blocks.

In the same field of endeavor, Kondo teaches wherein a functional section (Kondo, Figure 4, items 64 and 65) includes a function to perform an image quality improvement processing, and a common command includes information related to the image quality improvement processing (Kondo, paragraph 0207; i.e., the class code is common to both types of image quality improvement processing features [resolution-creating and noise-eliminating]), and

Wherein the common command includes information indicating a noise level and a resolution level of an image signal (Kondo, Figure 4, items 64 and 65, paragraphs 0207-0210; i.e., the resolution-creating or noise-eliminating coefficients are chosen based on the class code that is supplied to the adaptive processor 62).

Also in the same field of endeavor, Nakatsugawa teaches wherein a control section includes:

storage means for storing a correlation (i.e., a command conversion table) between a common command related to its own functional block and an intra-functional-block command used to control the control section (Nakatsugawa, Figure 1, item 7);

reception means (Figure 1, item 6) for receiving the common command from a control block (Figure 1, item 4a); and

conversion means for, if the common command received by the reception means is the common command related to its own functional block, converting this common command into an intra-functional-block command based on the correlation stored in the storage means (Nakatsugawa, Figure 1, item 6, Column 4 line 64 - Column 5 line 8), and

wherein each common command is converted into a block-specific command based on a conversion table (Nakatsugawa, Figure 1, item 7) that associates each common command with an initial value (Nakatsugawa, Figure 2, "Play" and "Stop"), a predetermined number of functional blocks (Nakatsugawa, Figure 2, "CD" and "DVD" of various types; i.e., one of functional blocks 5b, 5c, or 5d in Figure 1), and the block-specific command corresponding to each of the predetermined number of functional

blocks (Nakatsugawa, Column 5, lines 26-42; i.e., each of the block-specific commands CP1, CS1, DP1, DS1, etc., correspond to one of the functional blocks 5b, 5c, or 5d).

The motivation that was used in the combination of Claim 1, supra, applies equally as well to Claim 15.

3. **Claim 9** is rejected under 35 U.S.C. 103(a) as being unpatentable over Diard, Kondo, and Nakatsugawa as applied to Claim 1 above, and further in view of Yoon et al. (U.S. Patent No. 6,345,185) ("Yoon").

Regarding Claim 9, Diard, Kondo, and Nakatsugawa disclose wherein the block that issues the common command transmits most recent values of the common commands of all of kinds or some of the kinds (Diard, Column 6, lines 12-17).

Diard, Kondo, and Nakatsugawa do not expressly disclose transmitting the common command if a command indicative of a normal operation from the functional block that is to operate when having received the issued common command is not returned.

In the same field of endeavor (e.g., command transferring in a mobile communication system), Yoon teaches transmitting a most recent common command if a command indicative of a normal operation from a functional block that is to operate when having received the issued common command is not returned (Yoon, Column 9, lines 31-39).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Yoon's teachings of command

transferring in a mobile communication system with the teachings of Diard, Kondo, and Nakatsugawa, for the purpose of assuring that all of the functional blocks properly receive the common commands.

4. **Claims 16-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Diard, Kondo, and Nakatsugawa as applied to Claim 1 above, and further in view of Hao et al. (U.S. Patent No. 6,434,432) ("Hao").

Regarding Claim 16, Diard, Kondo, and Nakatsugawa disclose wherein the control block and the plural functional blocks respectively have a bus interface (Diard, Figure 1, item 160), and

wherein the control block and the plural functional blocks respectively are connected to each other by a bus using the bus interface (Diard, Figure 1, item 160).

Diard, Kondo, and Nakatsugawa do not expressly disclose wherein the bus interface includes:

a message buffer for storing received data; and

a message storage control section for selectively storing data received via the bus in the message buffer.

In the same field of endeavor (e.g., message transferring between multiple functional blocks), Hao teaches wherein a bus interface includes:

a message buffer for storing received data; and

a message storage control section for selectively storing data received via the bus in the message buffer (Hao, Column 9, lines 36-42).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Hao's teachings of message transferring between multiple functional blocks with the teachings of Diard, Kondo, and Nakatsugawa, for the purpose of preventing wasting storage and processing time for functional blocks that are intended recipients of data or commands.

Regarding Claim 17, Hao teaches wherein the control block transmits the common command having at least an identifier to the plural functional blocks (Hao, Column 8, lines 64-67); and

wherein if the identifier of a predetermined common command that has been set beforehand agrees with an identifier of the common command that has been received via the bus, the message storage control sections in the plural functional blocks store this received common command into the message buffer (Hao, Column 9, lines 18-42).

The motivation that was used in the combination of Claim 16, super, applies equally as well to Claim 17.

Regarding Claim 18, Hao teaches wherein the bus is a CAN bus (Hao, Column 1, lines 18-23).

The motivation that was used in the combination of Claim 16, super, applies equally as well to Claim 18.

Prior Art of Record

5. The prior art made of record and not relied upon (cited on the attached PTO-892 form) is considered pertinent to applicant's disclosure.

Response to Arguments

6. Applicant's arguments with respect to claims 1, 14, and 15 have been considered but are moot in view of the new ground(s) of rejection. Diard (U.S. Patent No. 7,015,915) teaches the newly added limitations, as discussed above.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Faisal M. Zaman whose telephone number is 571-272-

6495. The examiner can normally be reached on Monday thru Friday, 8 am - 5:30 pm, alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on 571-272-3632. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Faisal M Zaman/
Patent Examiner, Art Unit 2111